

ABSTRACT

Rusdianti, Inta. 2011. **Use of Bacterial Isolates Multi Phosphates Solvents, SP36 and Fertilizers Liquid Organic Fertilizer Plant To Boost Productivity Soybean (*Glycine max* L. Merrill) in the Land of Sour.**
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Keywords: Productivity, Soybean (*Glycine max* L. Merrill), Fertilizer

Soybean (*Glycine max* L. Merrill) is a commodity food crops that contain high protein. Society needs to soybean (*Glycine max* L. Merrill) continues to increase, but increased production of soybean (*Glycine max* L. Merrill) having problems with the unavailability of a permanent production areas so easily displaced by other food crops. Therefore, increasing the productivity of soybean (*Glycine max* L. Merrill) is directed on sour land located outside Java, while the acid soils generally contain Al, Fe, Mn is very high and the N, P, K, Ca, Mg, and Mo are very low, it is this which leads to constraints on increasing production of soybeans (*Glycine max* L. Merrill) in the Land of Sour. This study aims to determine whether the use of liquid organic fertilizer, inorganic fertilizer (SP36) and biofertilizer (inokulsi bacteria Phosphate solvent) may be increasing the productivity of soybean (*Glycine max* L. Merrill) on acid soils.

The research was conducted on the Date of 01Februari 2010 - 30 June 2011 at the Research Institute for Crop Legumes and Tuber (Balitkabi) Malang. Using the Random Groups Design (3 factors) was repeated 3 times. The first factor: without liquid fertilizer / with liquid fertilizer, the factor-2 dose SP36: 0g/3g/6g/polybag. Factors to Bacterial Solvents Inoculation-3 Phosphate: without Inokulsi / M1/Inokulasi bacterial inoculation of bacteria M2/inokulasi M1 + bacteria M2/Inokulasi Commercial.

The results showed that the treatment of SP36 at the dose of 3 grams of dry weight of plants can increase as much as 0.94 grams / plant. Giving SP36 as much as 3 grams combined with multi bacterial inoculation Phosphate M1 solvent can increase grain yield 17.7%, the interaction of multiple isolates of bacteria solvent Phosphate, SP36 and liquid organic fertilizer can increase grain yield by 76 %.